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ABSTRACT

An attempt to operationally define depressive retardation in 72 inpatients aged 4-16 used two percept-genetic tests. In a serial visual afterimage (AI) test retardation was defined as a successive reduction of AI size, and in a serial tachistoscopic presentation using the meta-contrast technique (MCT) it was seen as stereotyped repetitions of incorrect reports. These test signs correlated with each other and with clinical symptoms of depression. MCT stereotypy was associated in early school-age with signs suggesting a previous narcissistic injury. AI retardation was also evident in a normal group, particularly at age levels characterized by subjective expansion and anxiety. Depressive retardation, considered as an anxiety-curbing measure, can be observed down to the age of seven. (Author)

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DEPRESSIVE TENDENCIES IN CHILDHOOD AND ADOLESCENCE AS DEFINED BY PROCESS-ORIENTED EXPERIMENTS

by

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SUMMARY

Attempted to operationally define depressive retardation in 72 inpatients aged 4-16 using two percept-genetic tests. In a serial visual afterimage (AI) test retardation was defined as a successive reduction of AI size, and in a serial tachistoscopic presentation using the meta-contrast technique (MCT) it was seen as stereotyped repetitions of incorrect reports. These test signs correlated with each other and with clinical symptoms of depression. MCT stereotypy was associated in early school-age with signs suggesting a previous narcissistic injury. AI retardation was also evident in a normal group, particularly at age levels characterized by subjective expansion and anxiety. Depressive retardation, considered as an anxiety-curbing measure, can be observed down to the age of seven.

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KEY WORDS

Depressive Retardation - Childhood and Adolescence - Meta-Contrast Technique - Visual Afterimages.

ZUSAMMENFASSUNG

Die Forschung bedeutete, dass man depressive Hemmung bei 72 psychiatrischen Patienten im Alter von 4-16 Jahren operationell definieren wollte. Für diesen Zweck wurden zwei perceptgenetischen Tests verwendet. In einem serialen visuellen Nachbildstest (NB) zeigte sich die Hemmung als eine allmähliche Reduktion der Grösse des NB und in einem serialen tachistoskopischen Test, MCT (Meta-Contrast Technique), als eine stereotypische Wiederholung der inkorrekten Berichte. Diese Tests korrelierten mit einander und mit klinischen Symptomen der Depression. In dem frühen Schulalter bestand MCT-stereotypien von Zeichen die an einer narcissistischen Frustrierung erinnerten. Die Hemmung in NB zeigte sich auch bei einer Normalgruppe, besonders bei Altersniveauen die von einer subjektiven Expansion oder Angst karakterisiert wurden. Die depressive (angstdempfende) Hemmung war schon im Alter ab 7 Jahre beobachtet.

SCHLÜSSELWÖRTER: Depressive Hemmung - Kindheit und Jugendalter - Meta-Kontrast TEKNIK - Visuelle Nachbilder.

INTRODUCTION

Many problems connected with depression in childhood and adolescence still remain to be solved. While some clinicians claim to have observed depression in childhood, even in infancy, others deny such a possibility and place the emergence of a true depressive symptomatology in the latency period or later. The roots of depression and its various manifestations are also debated. However, there appears to be a growing agreement among many students of the subject that depressive reactions in childhood and in adulthood, although being distinct in many ways, form a developmental continuity (see, e.g., Anthony, 1975). Accepting this assumption in a very general way, the present authors have tried to throw light on some stages in the development of depression from the post-oedipal period (5 years) until adolescence (15-16 years). The basis for our developmental description consists of two percept-genetic methods previously used to describe depression in adults.

Successive size estimations of afterimages (AIs) projected onto a screen in consecutive trials have been exploited to describe one of the core symptoms of depression i.e. retardation (Smith et al, 1970). It was previously found (Smith & Kragh, 1967), that patients suffering from anxiety are prone to produce oversized, often very dark AIs. This was also corroborated in later studies (Smith et al, 1976). It could be shown that in patients characterized by anxiety as well as depressive retardation such oversized AIs were more likely to appear at the beginning of a series of AI productions than at the end. In other patients characterized by anxiety and a depressive mood but not by retardation, AIs tended instead to increase over trials. Thus, depressive retardation seemed to be specifically related to successive reduction of AI size.

These findings were on the whole cross-validated in two later studies (Smith et al, 1971, 1976) where measurements of the size of AIs were combined with the subject's estimation of AI darkness. The larger and darker the projected AI the more likely it was that it represented anxiety in the subject. The retardation operating in the AI test obviously counteracted the black and threatening image covering most of the projection screen by gradually making it smaller and, often at the same time, better delineated and lighter. Analogous results were reached in the first of the above studies with a serial spiral aftereffect test (see also Andersson et al, 1972).

Retardation in the AI series correlated not only with appropriate clinical criteria but at the same time with signs of repetitive stereotypy in a test utilizing the Meta-Contrast Technique (MCT). This percept-genetic instrument involves tachistoscopic presentations of a stimulus A at exposure times starting from sub-threshold values which are gradually prolonged in consecutive exposures. Stimulus A is presented together with stimulus B to which the subject has been adapted beforehand. The development toward correct recognition of A within the frame of B may be arrested by a series of stereotyped repetitions of incorrect reports (getting stuck like a broken phonograph record). Such stereotypies have been shown to reflect depressive states of mind in the observer; the more marked or drawn-out the stereotypy the more likely it is that it reflects depressive retardation. (Regarding signs of anxiety in the MCT, see below and Smith et al, 1976).

While studying children 4-16 years of age using the AI test and the MCT the present authors again encountered the problem of depression. The questions actualized by this encounter may conveniently be grouped into two categories: (1) Can our descriptive tools be applied to children at or even before school age without considerable loss of power and precision? (2) If the answer is affirmative, how does depression manifest itself at different age levels in a sample of normal children and in clinical children generally characterized by anxiety but often also by depression?

Since we have already been able to make use of both the AI test and the MCT for other diagnostic purposes in children we would expect an affirmative answer to our first question. As far as the second question is concerned, we presume that signs of depression and depressive retardation, although never deviating so far from adult signs as to be unrecognizable, will show at least some distinctively childish features consistent with the child's level of maturation, i.e., the child's cognitive-emotional grasp of its own self in relation to outside reality. Examples of such changes in the development of various other defense strategies have been presented in previous studies (Smith & Nordström, 1975; Smith & Danielsson, 1977).

However, it is not enough to state that we intend to follow depessive manifestations from a cognitive-developmental perspective. We have

already mentioned that our methods of investigation are percept-genetic: in the AI test we follow the subject's adaptation to a perceptual phenomenon hitherto scarcely known to him and in the MCT we endeavor to prolong the perceptual micro-development in order to be able to scrutinize it step by step. The object of our studies is thus processes. What we are trying to do is to see depression as a quality characterizing those processes through which a subject tries to master his life situation. The studies referred to above very clearly show that the process perspective has been fruitful for diagnostic-descriptive purposes. Finally, the process perspective and the choice of instrumentation consistent with it imply that we put more emphasis on the formal side of depression, the retardation-inhibition complex, than is usually done in dynamic literature.

METHODS

The Afterimage Test

In the AI test the individual is confronted with a phenomenon the origin of which is largely unknown to him, it being neither clearly part of the self nor of outside physical reality. He is asked to come to terms with this phenomenon in various ways in a series of consecutive trials. Since the AI method has been presented in detail many times before (e.g. Smith & Danielsson, 1977) and since only part of the data are going to be exploited here the test description will be abbreviated.

The AI apparatus consisted of a semi-transparent movable screen. Two markers at the front of the screen were used by the subject to measure the width of the AI. The stimulus, projected from behind the screen, was a relatively intense red schematic face 5.5 cm wide. The subject fixated it for 20 sec. in order subsequently to project an AI on the screen. The fixation distance was 39 cm and the projection distance 59 cm. The expected Emmert size of the AI was thus 8.3 cm. Besides measuring AI size the subject also estimated AI brightness and described its color. However, only size measurements concern us here. In order to extinguish the AI, a diffuse red light was exposed for 5 sec. after each trial. Ten trials were used. The time required per trial was about 70 sec.

Scoring retardation in the AI series

As we have seen, the original method of determining retardation in a series of AI data was to find out whether a large image ($\geq$11.0 cm), supposed to reflect anxiety, appeared among the early measurements, thereafter followed by smaller size values (Smith et al, 1970).

The method used in the cross-validation studies (Smith et al, 1971) included both size values and quantitative estimations (1-10) of AI darkness for altogether 15 consecutive trials. Keeping the dimensions of size and darkness apart, values of the linear regression were computed for trials 1-5, 4-8, 7-11, etc., i.e. in a series of steps with a certain overlap. The next task was to test all sequences of consecutive regression values until the sequence yielding the largest positive or negative sum had been found. Finally, sequences for size and darkness were weighted and compared to find the dominant overall trend.

Since estimations of darkness seemed too unreliable in many of the present subjects computations were limited to size values. When a subject missed more than two size measurements of the ten belonging to the standard series for children his AI data were omitted from further treatment.

Using the least square method the slope (M) of the series of size data was computed according to the equation

$$y = Mx + b$$

where b = y intercept. Three possibilities were considered: (1) M is positive. No further computations were needed. The series was labeled as non-retarded. (2) M is negative and at least -0.20, a value representing the approximate, lower quartile of all Ms in the present clinical sample. This value is not considered indicative of retardation in cases where the last 5 values of the AI series have a positive slope with a value (m) greater than M, i.e. where the general trend of the curve is strongly contradicted by the final trend. (3) M is negative, but weakly, i.e. less than 0.20. This value is disqualified by any positive value of m.

Other, more complicated computations, reminiscent of the ones employed in previous studies, have also been tried. The most important conclusion to be drawn from these endeavors is that the simple method just presented does not seem to misrepresent our empirical data.

The Meta-Contrast Technique

This technique makes possible a reconstruction of how a new percept develops within the framework of a stabilized percept, a development normally supposed to occur over microtime. The use of a threatening or incongruent picture to initiate the development of a new percept is meant to facilitate reactions of anxiety and, as a consequence, defense against anxiety. For a detailed description of the test we refer to the Swedish manual (Smith et al, 1970a)or to Smith & Danielsson (1977).

The MCT involves tachistoscopic presentation of pairs of stimuli (A and B). Stimulus A is either incongruent with B or implies a threat directed against B. B is first presented at 0.01 sec., then at gradually increased exposure times until it has been correctly identified and, finally, at a standardized exposure level in a control series. Without the subject's knowledge, the experimenter thereafter introduces A immediately before B at 0.01 sec. While the exposure of B is kept constant that of A is gradually prolonged until A+B have been correctly reported. Subjects are instructed to describe everything they see on the projection screen. We are concerned here with the second MCT series where A is a threatening face and B a boy (hero) sitting in a room with a window at the back.

Scoring depression in MCT

As already mentioned, a negative AI trend in adults correlated with so-called stereotypy in the MCT, i.e. reports in one trial after another of something (most often something not clearly understood) seen at the section of B (the window) coinciding with the projected A. Stereotypies where one part of B (most often the window) was perceived prior to the rest did not clearly correlate with depression but were often found in primitive-hysteroid adults inclined to resort to something close-at-hand in order to account for their impression of two-step exposures. In some adult depressives, finally, A was reported as very old, sick, decayed, etc.

Utilizing this experience with adult subjects we tried to construct suitable scoring dimensions for our present sample in the following way.

Core signs: Stereotypy, or unchanged repetitions, at least five times in a row, of a non-correct A within the frame of B. However, A did not have to be uninterpreted ("something in the window", "a spot", etc.) but might very well have a definite meaning ("a tree", "a house", "a young person", etc). Thus we expected childish stereotypies to be

less empty than those most often found in adults. - The hero reported as injured, a sign which we felt obliged to connect with depression in our young subjects. - A reported as sick, etc (not encountered here).

Marginal signs: Primitive stereotypy, or at least four unchanged repetitions of reports that the window in B appears before the rest of B on the screen. - A reported as old (a rather common sign). - The hero reported as sad (also a common sign).

Signs of anxiety in the MCT will be taken up directly in the text below.

SUBJECTS

Subjects in the normal group ranged from 4 to 15 years of age. They were selected in such a way as to make subjects at all age levels comparable with respect to sex and social background. Among 72 school children (7-15 years) 69 completed the AI test and among 50 pre-school children (5-6 years) 27 did so. MCT data were secured from all subjects.

Subjects in the clinical group ranged from 4 to 16 years of age. They were primarily selected with an eye to symptoms of anxiety. All in all the social background of these children was less academic than that of the normals, a difference to be accounted for by our grouping of subjects according to cognitive level. Among 62 school children (39 boys, 23 girls) in this group 32 boys and 21 girls completed the AI test. From the group of 10 pre-school children (4 boys, 6 girls) the test was completed by 1 boy. All of them went through the MCT.

All children were given the Landscape Test constructed by Piaget & Inhelder (1941) to measure cognitive egocentricity. Age groups 5-6, 7-8 and 9-11 were divided in more egocentric or immature subjects, on the one hand, and less egocentric or mature ones, on the other (for details about this procedure, see Smith & Danielsson, 1977). The 11-year-olds who made no errors were included among the 12-13-year-olds. All normal subjects aged 12-15 understood the Landscape task but some clinical subjects 12-16 did not. If necessary these few subjects, called (11)12-13 imm. or 14-16 imm. in the tables, will be kept apart from the others.

The clinical subjects were patients at a child psychiatric ward; all of them had more or less florid symptoms of anxiety; none were suspected of brain dysfunction. Subjects were free from medication while tested by us

except for the few cases where such treatment was absolutely necessary. The clinic staff was not asked for final diagnoses of these cases but for concrete observations and impressions referring, above all, to such qualities as a striking inability to experience joy and happiness, deep sadness, apathy, immobility, passivity, extreme lack of self-confidence and the like. In addition to these depressive core symptoms our children often also showed a number of more age-specific and indirect symptoms of depression, as e.g., aggression or restlessness.

One group had certain signs of depression. In other subjects these signs were combined with manic components or with very obvious compulsive rituals. The reason why the latter subjects were not included among the depressed ones will be accounted for in the discussion. One group of cases with marginal signs of depression was also kept separate as were those few subjects where reliable clinical information regarding depression was unobtainable.

The collection of clinical information was entirely entrusted to one of us (A.D.) while the other (G.S.) independently made the final decisions regarding the scoring of the MCT. The decisions were not difficult as attested by high inter-rater reliabilities in several studies. Computations of AI trends could not very likely be affected by the above deliberations.

RESULTS

In Table 1 negative AI trends are most closely associated with clear stereotypy in the MCT. A χ^2 based on the italicized figures yields a value of 7.36 (df = 2, $P < 0.025$, one-sided); the exact P utilizing the fourfold contrast between the italicized upper left corner and the rest of the table is 0.011 (one-sided), and the G index of agreement reflecting the level of correlation expressed by that contrast reaches a value of + 0.41. However, comparing the two left columns in the table we notice that the co-variation does not seem to increase with the size of the negative M. Among the 5 exceptions in the lower left corner we even find the three most extreme M values (-0.50 or more). Extreme negative Ms are likely to be found in AI series with late, sudden "regressions" to very small size values, a general sign of discontinuity rather than a particular sign of retardation. Aside from this, it should not only be mentioned that a negative AI curve implies

diminishing anxiety, operationally speaking, but also that most of the pronounced anxiety signs in the MCT (open fright in the test situation, defenses leaking anxiety, fusion of the threat and the hero) very rarely go together with stereotypy. - Table 1 will serve as the prototype for the choice of comparison groups in the following tables. One exception will be the sign "hero injured" which was predicted to be a sign of depression but not particularly a sign of retardation (even if the only such sign entered in the table happens to belong to a child with a negative AI trend).

Insert Table 1. Correlation between the MCT and the AI test in the clinical group.

There is a significant agreement in Table 2 between a negative trend in AI size and depression without compulsive rituals or manic components. The exact P considering this fourfold contrast yields a value of 6×10^{-5} (one-sided) and the G-index of agreement a value of +0.57. If the italicized figures in the table are used the value of the corrected χ^2 will be 21.25 (df = 4, $P < 5 \times 10^{-4}$, one-sided). The size of the χ^2 indicates that the marginal or mixed forms of depression often correspond to AI series with mixed trends.

Table 2. Correlation between the AI test and clinical symptoms.

In Table 3 real stereotypy in the MCT goes together with clear depression. The exact P for the fourfold contrast is 3×10^{-4} and the G-index +0.53. Calculation of a corrected χ^2 using the italicized figures produces a smaller value than in Table 2, but it is still significant (11.61, df = 4, P = 0.01, one-sided). Apparently, there is a less marked marginal group of signs in the MCT corresponding to the weak or mixed symptoms of depression.

Table 3. Correlation between the MCT and clinical symptoms.

If we combine both tests (in 47 subjects, cf. Table 2), the test-symptom correlation can be appreciably enhanced. With clear signs in at least one test and non-marginal symptoms of depression defined as

plus poles, the fourfold table yields an exact Fisher's P of 10^{-6} (df = 1, one-sided) and a G-index of +0.66.

There seems to be a difference, although not a very pronounced one, between the proportions of negative AI trends in the normal and clinical groups (Table 4). However, the difference with respect to MCT stereotypy is clearly significant: 8 cases of stereotypy among 72 normal school children, 18 cases in the corresponding clinical group of 62 ($\chi^2 = 6.84$, df = 1, $P < 0.005$, one-sided test).

Insert Table 4. Frequency of negative AI trends.

Quantitative comparisons between age-maturity levels should be made only within the normal group where the selection of children was carefully balanced with respect to sex, age, social background, etc. The infrequent appearance of depressive MCT signs among normals confines the inspection to the AI test. Two maxima with respect to negative trends appear in Table 4: one among the pre-school children and one in puberty (14-16). In previous studies (Smith & Nordström, 1975; Smith & Danielsson, 1977) it was shown that these very age groups were also characterized by subjective inflation, the young children by projection and the youngsters in puberty primarily by anxiety.

Even if we refrain from quantitative comparisons within the clinical group we consider it legitimate to discuss a few qualitative ones - with respect to the MCT. Table 5 seems to show that such signs as uninterpreted stereotypy, hero duplication, "hero injured" and "A old" are unevenly distributed over the different age-maturity levels.

Table 5. Overview of the MCT results in the clinical group.

DISCUSSION

As we have already indicated there has been and still seems to be a great deal of disagreement among students of depression regarding its existence in childhood, its symptomatology and etiology. However, most critics of assumptions regarding depressive illness in infancy and early childhood appear to accept the presence of depressive signs in the post-oedipal phase, i.e. the period where the present investigation takes off. Abraham's (1911) "primal parathymia" refers to depressive feelings even

during the oedipal period. Sandler & Joffe (1965) have described cases of depressive reaction rather early in childhood. Even if this reaction should not be confused with depressive illness it is considered to be a basic psycho-biological reaction to mental pain. In the present empirical context the differentiation made by these authors does not seem decisive. We would rather agree with Mendelson (1974) who, after perusing the clinical literature on childhood depression, concludes that "long-lasting states of depressive illness do occur in childhood and are overlooked or are diagnosed as something else." As described, these cases show some of the core symptoms listed by Lehmann (1959): sadness, reduction of drive, retardation of expressive motor responses, etc. Sandler & Joffe (ibid.), however, have rightly invoked caution in the use of melancholia in adults as a starting point for the investigation of childhood depression.

In all discussions about the probable causes of depression most clinicians with a dynamic leaning agree that early forms of deprivation, neglect or loss are key topics in its etiology (Malmquist, 1972). Bibring (1953) especially emphazises the loss of self-esteem. According to such critics as Rie (1966), however, loss of self-esteem presupposes conceptualization of one's self and depressive reactions could, therefore, hardly develop before adolescence. Mahler (1961) is more in agreement with Bibring but argues that the process of individuation-separation is a prerequisite for the ego-filtered emotions of grief and depression to occur. As an alternative (but still narcissistic) precursor of depression, loss of psychological well-being (Sandler & Joffe, ibid.) would be more consistent with the embryonic state of a young child's "representational world". At the same time experienced clinicians cannot avoid assuming the existence of some very basic, biological factors behind depression. The description by Engel & Schmale (1972), for example, of a primary regulatory conservation-withdrawal process in most animals may be used as a tempting platform for speculations about a normal depressive reaction of which depressive illness is but a pathological variant. This again actualizes Sandler and Joffe's basic psycho-biological response.

Our own perspective of depression may be biased in at least three ways: (1) Our instrumentation favors a process-oriented, rather formal description of depression. However, MCT data are also closely related to content and meaning. (2) The depressive test signs were originally based on studies of adults. Yet, we have been able to introduce new variations

of these signs to fit our young subjects. (3) The present clinical subjects were not primarily chosen as representatives of depressive states. The profile presented by our depressives is thus not very sharp in details but the symptomatology of these subjects very closely resembles the depressive reaction described by Sandler & Joffe (1965). Moreover, the clinical observations are surprisingly reliable to judge from the intercorrelations.

We would also like to defend the removal of subjects with obsessive-compulsive rituals and manic symptoms from the main group of depressives. In a previous investigation using percept-genetic methods (Eberhard et al, 1965) it was shown beyond doubt that the presence of compulsive defenses blotted out the depressive profile of the test data. Obviously, the obsessive isolation and control of affect renders the particular "curbing" strategy in depression at least partly superfluous. Anthony (1975) summarizes: "When depression is signaled, obsessive magical controls may be involved to compensate for feelings of helplessness, hypomanic excitement to overcome lack of energy..." (p. 265). However, these cases of mixed symptoms show at least some correlation with marginal signs in the AI test.

The correlations between the two tests, on the one hand, and the clinical criteria, on the other, must be considered quite high in view of all the disturbing influences expected to impair the reliability of our data (and, in case of extremely negative AI curves, their validity). The difference between the normal and clinical groups was moderate but consistent and most pronounced with respect to the MCT. It should be kept in mind that only a few clinical subjects were described as markedly depressive and many as not depressive at all. Our first question about the applicability of the test methods to children can thus be answered in the affirmative.

There was also a significant correlation between the two tests, especially between all kinds of "real" stereotypy in the MCT and negative (but not extremely negative) trends in the AI series. The gradual curbing of subjective expansion thus reflected in both tests will be discussed later as one of the core characteristics of depression.

Among the more marginal signs, primitive stereotypy may be a precursor of "real" stereotypy because it is often found in young children. However, it has also been scored in primitive-hysteroid adults where the

association to depression is doubtful. "A old" was most often noted in adolescent clinical subjects but did not, as an isolated sign, correlate positively with clinical symptoms. In previous adult groups analogous signs were generally more accentuated ("A sick", "rotten", "dead", etc). "Hero sad" is probably a rather weak sign whereas "hero injured" might be related to depressive symptoms in young children.

Before discussing developmental trends in the picture of depression emerging in our test data we need to analyze more closely the meaning of hero-duplication in the MCT and the stereotypy associated with it, i.e., the inclination of some children to repeat in one trial after another, and in a stereotyped way, that they perceive a playmate, another boy, etc., in the window (instead of perceiving the threatening A). Stereotyped hero-duplication was scored, above all, among 7-10-year-olds.

Hero-duplication can, first of all, be interpreted as an introjection of the threat or, more specifically, a projected introjection (cf. Kragh, 1969; Andersson & Weikert, 1974). Since the introject closely resembles hero we see it as a narcissistic defense. In a previous study of normal children (Smith & Nordström, 1975) we learned that hero-duplication was particularly common in early school-age. A combination of hero-duplication and stereotypy would, therefore, be a more plausible occurence at this age level than later. However, in order that this combination should not be dismissed as a statistical triviality two things should be emphasized.

(1) Stereotypy does not necessarily combine with hero-duplication even if the subject is scored for that sign at some place in his percept-genesis. (2) Most subjects with hero-duplication stereotypies have access to other defensive strategies which would also lend themselves to stereotyped repetitions: reports of animals or objects, of non-threatening persons who are not duplicates of the hero, of meaningless spots, etc. Such stereotyped series of reports are often seen in other subjects.

We have already mentioned that many writers see a close relationship between depression and narcissistic injuries. In her discussion of libido distribution A. Freud (1970) maintains that narcissism would be the natural counter-move to the depressive neglect of the self. The stereotyped repetition of a narcissistically colored introject could be an attempt to bolster a "weakened" self, an attempt simultaneously marked by a beginning depressive retardation.

Viewing our data from a developmental perspective we now venture to offer the following interpretations:

(1) We have ample reasons to believe, after many investigations, that a negative AI trend often represents a successive reduction of tendencies to inflate the self. According to the present data, such a reaction is not uncommon among normal children and adolescents. Moreover, it is noted more often in periods of subjective expansion and anxiety (the years around 4-5 and 14-15) as delineated in our previous analysis of the same group of young subjects. This tempering influence may be conceptualized as a basic psycho-biological response (Sandler & Joffe, 1965) and may serve both as an adaptive corrective and a defense against rising anxiety.

(2) We cannot agree with those clinicians who want to isolate childhood depression as something entirely different from adult depression. The formal core signs in both test correlate with clinical criteria over ages from around 7 to 16, at the latter age becoming more or less inseparable from adult signs with respect not only to style but also to subjective meaning (MCT). Even if our data seem to reflect a basic depressive process structure over a wide age range, however, they also reflect important developmental differences with respect to the subjective manifestations of the depressive reaction (cf. Anthony, 1975).

(3) The AI data in normals and results from both the AI and the MCT in the clinical group would indicate that signs of depression can at least be found in the post-oedipal phase. During early school years these signs become very distinct.

(4) Our data at the pre-school level are very inconclusive. But if depression is closely related to a narcissistic injury we would expect these children to visualize the threatened self in a very concrete way - as if the threat was physical. Consequently, these children and no others report that the hero is injured in the MCT (cf. A. Freud, 1970).

(5) As defense strategies become more internalized, concrete references to an injured body are expected to disappear. Instead the children, particularly cognitively less mature children at early school age, try as it seems to counter a narcissistic blow by repeatedly projecting an image of themselves in the MCT. The stereotypy of this repetition, at the

same time, already reveals the retarding quality of depression.

(6) At the upper age levels in our clinical group there is no hero-duplication. Stereotypies without any articulated content or meaning become more frequent. The picture of adult depression has emerged. An increased number of references to A as an old person would not seem to be specifically related to depression according to Table 3. However, if scored without regard to the presence of other signs in the oldest age group this sign shows a weak correlation with depressive symptoms.

Thus depressive retardation, viewed from the "stylistic" angle as negative regression in the AI test, is a rather general form of response typical not only of adults but even found below early school age. Scored as stereotypy in the MCT this depressive style is more exclusively limited to clinical cases where it obviously restrains the most severe manifestations of anxiety. Taking into account the subjective side of depressive responses, their content and meaning as revealed by the MCT, we registered a close similarity between our subjects and adults only around puberty. Further down the age and maturity ladder depression became more openly associated with counter-measures reflecting an original narcissistic injury as part of the etiology. Depression in adults, then, seems like an automatized and empty copy of a more openly meaningful childish reaction.

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Table 1. Correlation between the MCT and the AI test in the clinical group.

AI / MCT	1 Neg. M ⩾ .20 (no pos. m >M)	2 Neg. M < .20 (no pos. m)	Σ 1-2	3 The rest with a negative M or m	4 The rest	Σ 3-4
Clear stereotypy	5	4	9(1)	3	1	4(1)
Hero injured	0	1		0	0	
Hero sad	1	1		2	0	
A old	1	2		2	2	
Prim. stereotypy	0	0	6(5)	4	0	10(7)
The rest	5	1	6(2)	11	8	19(6)

Figures within parenthesis refer to the number of subjects with severe anxiety signs in MCT

Table 3. Correlation between the MCT and clinical symptoms.

MCT Clinical symptoms	1 Real ster-eotypy	2 Hero injured	Σ 1-2	3 Prim. ster-eotypy	4 Hero sad/ A old		Σ 3-4	5 The rest
+ depression (no rituals or manic components)	12	1	13	0	0	3	3	5
(+) depression (no rituals etc)	1	0		1	0	0		2
depression + rituals	2	1		2	0	1		7
or manic components	0	0		1	0	0		4
Σ marginal signs			4				5	13
No depression	2	1	3	1	3	4	8	10
Inadequate inform.	1	0		1	0	0		6

Table 5. Overview of the MCT results in the clinical group.

Level	<	7-10(11)	(11)12-13	7-10(11)	(11)12-13	14-16
MCT hier-archy	7 yrs	years imm	years imm	years mat	years mat	years all
Ster. non-interpret.	0	0	1	0	1	3
Ster. non-human obj.	0(3)	0(2)	0	3(1)	1	1
Ster. ad-ult human	0	0(1)	0	0	0	1(2)
Ster. he-ro-dupl.	0(2)	4(2)	1	2	0	0
Ster. prim.	2(2)	0	0	2	0	2
Hero in-jured	3	0	0	0	0	0
Hero sad	0(1)	1	0	0	1	1
A old	1(1)	0	0	0	4	3
The rest	4(46)	6(14)	0	9(16)	6(17)	10(17)

Subjects scored and used up in the hierarchical order.

Figures within parenthesis refer to the normal subjects